Better Leadership Via a Seven Factor Model on Net Profit – A Case of Facebook in USA

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Abstract
The story of Facebook and Mark is becoming successful lesson for many businesses which shows their ambitious plan and ideas and working hard on it. We recognized leadership role of Facebook lying in online social media industry and network with a social site for many people to connect around the world.

This paper will uses OLS method to estimate effects of Facebook good management, via both micro and macro factors on net profit. Authors will analyze effects of Seven (7) micro and macroeconomic factors such as: stock price, net profit, lending rate, inflation, GDP growth, S&P500, etc. on net profit of an online media company, Facebook in USA during 2014-2019 and make further analysis. Findings show that if inflation, GDP (increasing too much) there is significant effect on reducing Facebook net profit and the next factor is decreasing SP500.

Key-words: Facebook Net Profit, Leadership, Net Profit, GDP Growth, Inflationary, Market Interest Rate.

1. Introduction

It is undeniable that millions of people in the world use Facebook as an effective online social media channel to link with each other and this created success for Facebook.

Its strong features are still friendly for social network for friends and businesses, with attractive constructed website and very good interface.
Facebook not only provide a huge information and data for people, but it also help us to share photos, videos, status, feelings, location, etc.

Our paper organized with introduction, research issues, literature review and method, results, discussion and conclusion.

2. Content

2.1. Research Questions

Question 1: What are effects of 7 macro economic factors on Facebook net profit?

2.2. Literature Review

<table>
<thead>
<tr>
<th>Authors</th>
<th>Year</th>
<th>Results, contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sadia and Noreen</td>
<td>2012</td>
<td>Banking index much affected by exchange rate and interest rate (short term)</td>
</tr>
<tr>
<td>Winhua and Meiling</td>
<td>2014</td>
<td>Bank income much affected by macro effects</td>
</tr>
<tr>
<td>Krishna</td>
<td>2015</td>
<td>Between stock price and macro factors there are causal relation.</td>
</tr>
<tr>
<td>Kulathunga</td>
<td>2015</td>
<td>In Sri Lanka, stock market curtailed bu increasing deposit rates</td>
</tr>
<tr>
<td>Ahmad and Ramzan</td>
<td>2016</td>
<td>Investors might consider macro effects in portfolio of stock investment</td>
</tr>
</tbody>
</table>

Last but not least, Quy and Loi (2016) stated that between real estate stock price and factors (inflation rate, GDP growth rate, and exchange rate) there is significant impact. Also, there is no relation between real estate stock price and treasury bond 10-year.

3. Methodology and Data

This research paper establishes correlation among econ factors and uses OLS regression model. Facebook net profit is a function with 7 variables presented below.

4. Main Results

4.1. General Data Analysis

First of all, We see that, between Facebook net profit (Y) and CPI, cost, sale there is positive correlation:
Looking at tables of correlation and covariance matrix, we find if G and CPI go up, Y (net profit of Facebook) will go up. In addition, Between R and Y, correlation is higher than that between Y and G or CPI.

Also table 2 shows that std. deviation is highest in case of stock price and SP500.
4.2. Regression Model and Main Findings

4.2.1 Case 1: Regression model with single variable: cost (c.o)

OLS give results:

\[
\begin{align*}
\text{Dependent Variable: Y} \\
\text{Method: Least Squares} \\
\text{Date: 02/26/20} \quad \text{Time: 21:55} \\
\text{Sample: 18} \\
\text{Included observations: 8}
\end{align*}
\]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>COST</td>
<td>1.904514</td>
<td>0.414949</td>
<td>4.59755</td>
<td>0.0037</td>
</tr>
<tr>
<td>C</td>
<td>0.322871</td>
<td>2.438068</td>
<td>0.132429</td>
<td>0.8990</td>
</tr>
</tbody>
</table>

\[
\text{R-squared: 0.778319} \\
\text{Adjusted R-squared: 0.741372} \\
\text{S.E. of regression: 4.253074} \\
\text{Sum squared resid: 103.5318} \\
\text{Log likelihood: -21.75132} \\
\text{Durbin-Watson stat: 1.232054}
\]

So, \( Y = 1.9 \times \text{cost} + 0.32 \), \( R^2 = 0.77 \) \( \text{SER} = 4.25 \)

Between net profit and Cost: coefficient 1.9, cost goes up, Facebook net profit will go up.

4.2.2 Case 2 - OLS model with 2 to 3 variables:

\[
\begin{align*}
\text{2 factors: cost, CPI} & \quad \text{Coefficient} \quad 1.6 \\
& \quad \text{3.04} \\
& \quad \text{Std. Error} \quad 0.5 \\
& \quad \text{3.3} \\
\text{3 factors: cost, CPI, G} & \quad \text{Coefficient} \quad 1.1 \\
& \quad \text{6.3} \\
& \quad \text{4.8} \\
& \quad \text{Std. Error} \quad 0.7 \\
& \quad \text{4.9} \\
& \quad \text{5.4}
\end{align*}
\]
As we see from the above table, in case of 3 variables, Facebook net profit is positively affected by cost, CPI, G.

4.2.3. Case 3 - regression model with 4-6 macro and micro variables: adding some other indicators into the above model:

OLS give results:

Table 5- OLS Regression

<table>
<thead>
<tr>
<th></th>
<th>4 variables</th>
<th>5 variables</th>
<th>6 variables</th>
<th>6 variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>4.1</td>
<td>1.6</td>
<td>-0.4</td>
<td>-0.9</td>
</tr>
<tr>
<td>CPI</td>
<td>2.9</td>
<td>-0.3</td>
<td>-2.7</td>
<td>-5.2</td>
</tr>
<tr>
<td>Cost</td>
<td>-2.01</td>
<td>-3.5</td>
<td>-6.4</td>
<td>-5.8</td>
</tr>
<tr>
<td>R</td>
<td></td>
<td></td>
<td>3656</td>
<td></td>
</tr>
<tr>
<td>Sale</td>
<td>0.58</td>
<td>1.07</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>Stock price</td>
<td>-0.07</td>
<td>-0.04</td>
<td>-0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>SP500</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Therefore, we see impacts of 6 macro factors, with the new variables: the above equation shows that between G, CPI, Cost, Stock price and Facebook net profit (Y) there is negative correlation, whereas it has positive correlation with lending rate, and SP500. We also recognize that R and cost, then CPI have the highest impact on Facebook net profit, while stock price and SP500 just has a slightly impact on net profit.

5. Discussion and Further Researches

We find that management of Facebook can pay more attention to R, cost and CPI because these factors have significant impact on net profit.

Beside, they need to manage the firm better, as refer in following international corporate governance standards below:

Beside, for better management and corporate governance at banks, we refer to below table:
Table 6 - Corporate Governance Standards - Limited America

<table>
<thead>
<tr>
<th>Subjects or parties</th>
<th>Main quality factors</th>
<th>Sub quality factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit committee</td>
<td>Formed by independent members of Board; At least one with auditing knowledge;</td>
<td>Overseeing financial report processes and audits;</td>
</tr>
<tr>
<td>CEO and The Chair</td>
<td>CEO ensure stakeholders with information of their interests; Chair may served as BD member; assessment of BD’s performance; Propose annual calendar of meeting;</td>
<td>CEO connects b.t BD and the co.;</td>
</tr>
<tr>
<td>Board of Directors or Management Board</td>
<td>MGT with respect to business, risks and people;</td>
<td>Ensure co.’s sustainability;</td>
</tr>
<tr>
<td>Internal control</td>
<td>Policies and limits of authority by Board; Developed by MGT;</td>
<td>Compliance with operating and financial processes;</td>
</tr>
<tr>
<td>Internal audit</td>
<td>proactively act on improved controls, standards;</td>
<td>Examined by AC;</td>
</tr>
<tr>
<td>External audit</td>
<td>Selected and evaluated by Board; review and assess MGT and IA practices; Assessed by BD and AC;</td>
<td>May report directly to shareholders</td>
</tr>
</tbody>
</table>

(Source: Dinh Tran Ngoc Huy, Article “The Summarized Evaluation of The US and Latin America Corporate Governance Standards After Financial Crisis”).

6. Conclusion and Policy Suggestion

From macro viewpoints:

We would suggest CPI need to be controlled properly according to development stage.

Facebook Leadership Plans Suggestion

In addition to, looking at Durbin-Watson Statistic in the above equation (4.2.3), we recognize that Durbin-Watson Stat of around 3.2, values from 2 to 4 indicating negative autocorrelation, i.e., there is negative autocorrelation detected in the sample.

Also looking at the above equation (4.2.3), we note that Facebook highly and positively impacted by lending rate, with very high coefficient (3656); hence, its board of management need to negotiate with proper banks and lenders to stabilize lending rates as it may cause risk.

Facebook itself also pay attention to stages in which CPI increase because it has negative impact on net profit.

Managing Facebook net profit depends on many factors, so it needs to increase and control cost and need a good stock price management. Last but not least, Facebook need to use a better stock price management. Stock price needs to fluctuate more stable. Hence, Facebook board of
management needs to perform action business plans that do not affect much on stock price and its volatility.

Besides, Facebook also consider upgrade regularly.

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